An outline
of the

HISTORY OF SILK

and the

MANUFACTURE

of

SILK SEWING THREADS

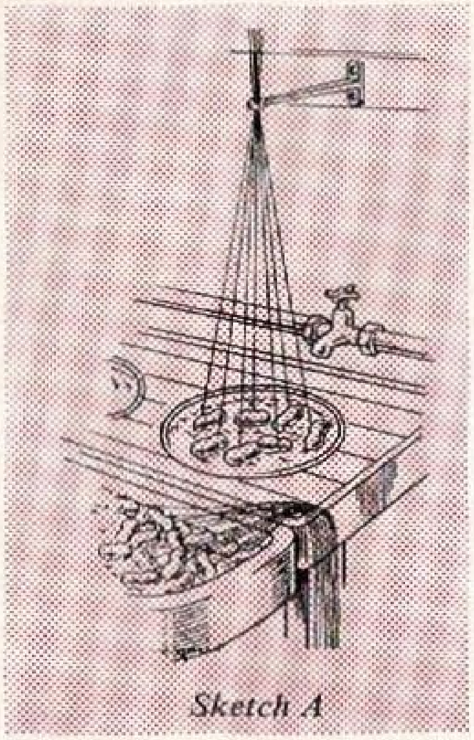
With the Compliments
of

SEWING SILKS LTD.

PERIVALE MILLS · GREENFORD · MIDDX

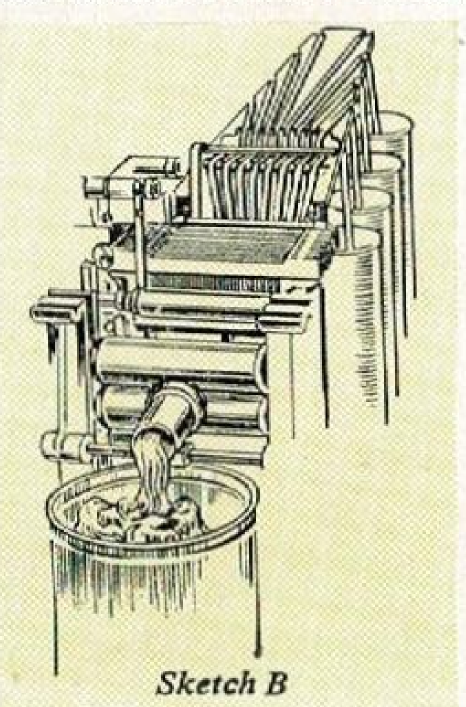
STAGES IN THE MANUFACTURE OF SEWING SILK

Of all species of silk spinning moths the Mulberry Spinner (Bombyx Mori) is the most important. In early Summer the Moth (1), after leaving the cocoon, lays up to 400 Eggs (1), from which the Silk Worms (1) are hatched. These eggs are so small that 30,000 to 40,000 weigh only 1 ounce. The worm is fed on Mulberry leaves and when hatched is very small but in a life of only 4/5 weeks, in which it changes its skin 4 times, it grows to a size of 3 inches, or 3,000/4,000 times its size at birth. After this the worm spins itself into a tightly fitting silk "House," the Cocoon (2) in which it finds protection during the two to three weeks for transformation to Chrysalis and Moth (3). When this has taken place the moth in order to creep out of the cocoon, softens one end of it with a liquid secretion; a few days later the female moth lays her eggs and dies shortly after.


Sketch A

The Cocoons (4) which are produced mostly in China, Japan, India, Asia Minor, Italy and France have a yellowy, white or greeny colour. To keep them undamaged for silk production, the chrysalis is killed by hot air. Cocoons consist of a very fine silk thread coated in a gum, up to two miles in length, of which only 300 to 550 yards can be wound off continuously after softening the gum in water. Of these continuous threads several are wound together (sketch A) on to a creel, whereby the Nett Silk Raws (6) is attained. By twisting several such Raws together, the Single Thread is achieved and again two, three or more twisted together according to the intended uses of the Silk, produce the Thrown Threads. The Sewing Silk thread thus produced is called NETT SILK.

The Cocoons which remain from the production of Nett Silk and those from which the Moths have hatched (5), go to form the raw material for SPUN SILK. The raw material for Spun Silk, therefore, is the same as that for Nett Silk, the treatment of the cocoon fibres only being different. This raw material is now degummed, washed and dressed, which consists of opening out the cocoons and straightening all fibres into a "combing"—a bundle of parallel silk fibres. The length and regularity of the "combing" is decisive in the quality of Spun Silk, and the first of these combings being the longest in fibre gives, therefore, a thread of greatest strength, elasticity and lustre. These combing bundles joined together form a Lap (7) and by further combing and drawing out produce the Sliver


Sketch B

THE CREATION OF SEWING SILK

MOTHS, EGGS AND WORMS ON MULBERRY LEAVES.

①

THE WORM SPINS ITSELF IN, AND THE COCOON IS CREATED.

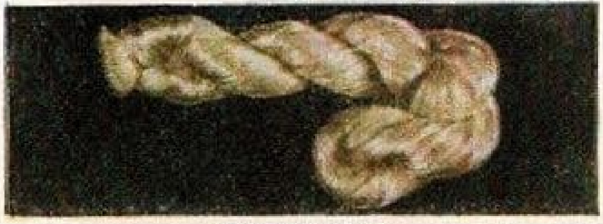
② ③

NETT SILK

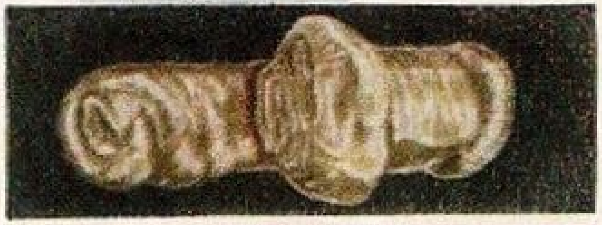
④

⑤

SPUN SILK

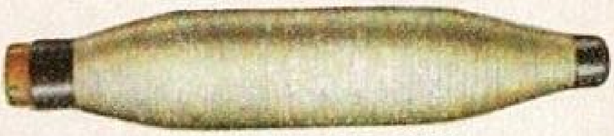

NETT SILK RAWS.

⑥


LAPS FOR SPUN SILK.

⑦

Sew with Pure Silk


TWISTED THREAD ON BOBBIN.

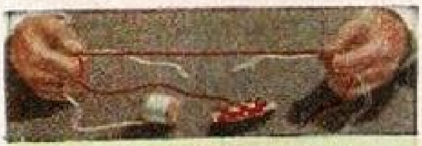
⑧

The Perfect Sewing Thread

⑨

PERIVALE SEWING THREAD

⑩


THE BREAKING TEST.

⑪

PERIVALE MILLS

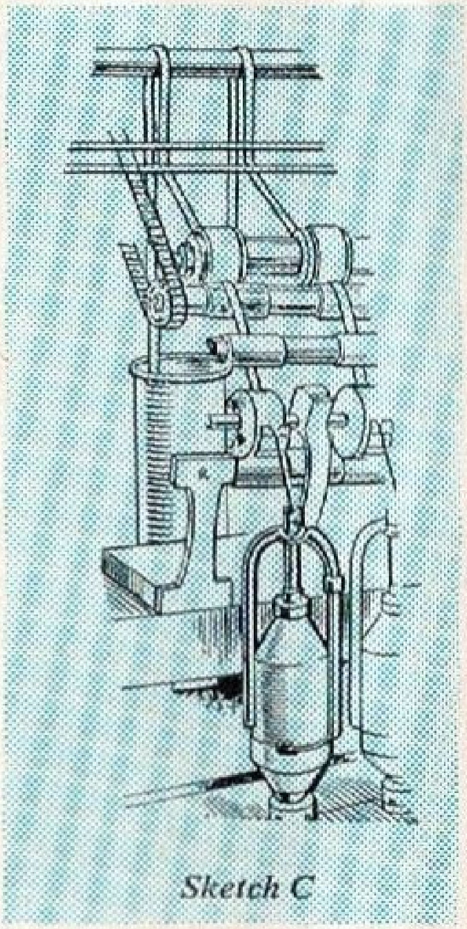
THE HOME OF PERIVALE SEWING SILKS

THE BURNING TEST.

⑫

SEWING SILKS LTD • PERIVALE MILLS • GREENFORD • MIDDLESEX

Stages in the Manufacture of Sewing Silk (*contd.*)



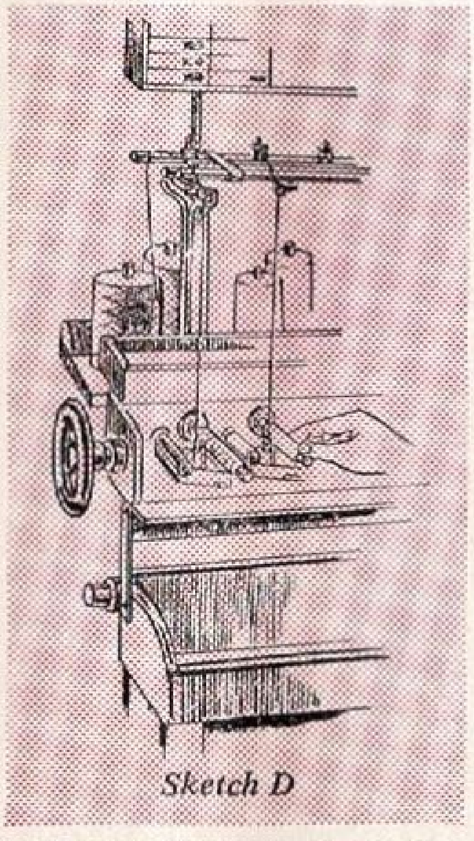
Sketch C

(Band). These are then repeatedly mixed, stretched and combed on the Drawing Frame (sketch B) to obtain perfect evenness, and the final Sliver is then drawn into Rovings (sketch C). The single fine silk "Yarn" (8) is made by spinning out the Roving on the Spinning Frame, and by folding two or three of these together on the Twisting Frame the Thread is obtained.

The thickness of the Thread is indicated by a Count number which expresses the length per gramme of the single Yarn, and the number of these folded together; e.g., 100/3 means that 100 metres of the single yarn weigh 1-gramme and that 3 of these singles are twisted together, therefore, 100 metres of the 3-fold yarn weighs 3-grammes. After Dyeing, the Silk thread is converted from hanks and wound (sketch D) by machines on spools (9), reels and cardboard cops (10). Perivale Sewing Silk is used for all sewing purposes in the home, by Tailors, Dressmakers, and in Industry, where a sewing thread with the greatest strength, elasticity and natural lustre is demanded. Scientific research and general practice have proved that all the essential properties of a good sewing thread are concentrated in pure Silk. This fact is emphasised by the many other Threads which are made in appearance and by description to imitate Silk.

Two simple tests you can make yourself to distinguish Real Silk from other threads. . . .

1. Burning Test: Put a match to real silk and it will not flare up, but will only smoulder, leaving a blob of black ash at the end and a smell of burnt horn. Cotton and Rayon burn quickly with a flame, leave no residue and smell like burnt paper. Synthetics burn like sealing wax, leaving a hard bead at the end. **2. Breaking Test:** Take about 2 ft. of Perivale Silk with an equal length of a substitute thread, holding the ends in each hand. Place both hands firmly on the table and pull the threads gradually tighter until one breaks. This one is never the Silk Thread !



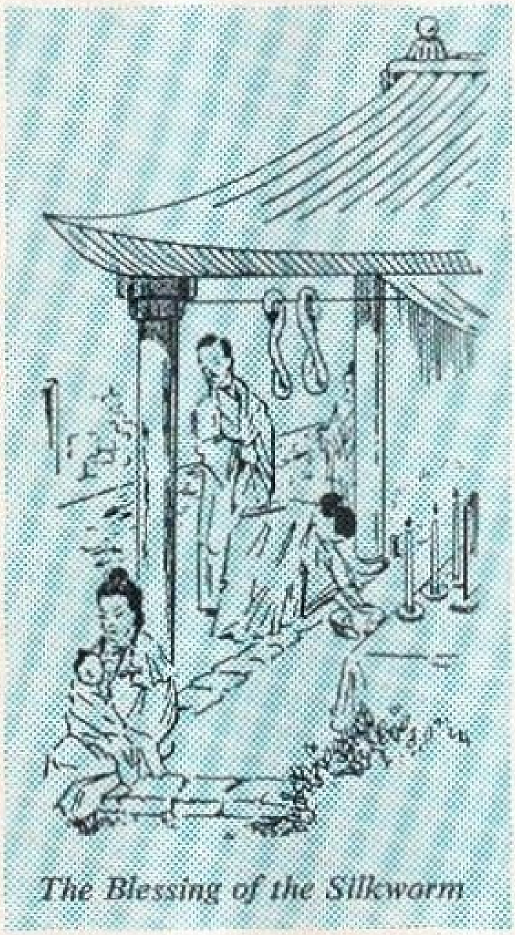
Sketch D

"A stitch in time saves nine" is a well known proverb but it is not always realised what an important part sewing threads play in our civilisation. When one considers the millions of stitches and the time and material involved in providing clothing and other commodities on which the entire human race depend for their survival and development, there can be no question but that thread is a fundamental necessity of life. Only the best thread is good enough.

AN OUTLINE OF THE HISTORY OF SILK

For thousands of years Silk has been treasured as the richest and most beautiful of textiles. Sold by the Ancients for more than its weight in pure gold, silk well deserves the esteem in which it has been held throughout the centuries. So fine that the single thread from cocoons reared from one ounce of silkworm eggs is sufficient to encompass the earth five times; so strong that it has a breaking strength three times as great as a steel rod of equal length and weight, this wonderful fibre retains its supremacy today over all other natural or synthetic products.

Whether or not we accept the contention of an eighteenth century author that Noah did not overlook the silkworm in selecting the occupants of the Ark, it is certain that silk culture is a very ancient industry. All the ascertainable facts confirm that China was the earliest known home of the silkworm. Indeed, the name China is derived from the Chinese word for silk and the country was known as "Serica"—the land of silk. It is interesting to note that from the Latin—"Serica" come the Italian "Seta", the Spanish "Seda," the French "Soie," and the German "Seide." The Russian word is "Shelk," in the Scandinavian countries it is "Silke," and from the Anglo Saxon "Seolk," the product of the silkworm is known throughout the English speaking world as "Silk."



The Blessing of the Silkworm

The first reference to silk in Chinese history records that the wife of Emperor W'Hang (2,500 B.C.) started sericulture on a scientific plan and also invented the loom for weaving the silk into patterned webs which were not only prized in China itself, but were eagerly sought after in India, Persia, Greece and Rome. The secret of sericulture was most carefully guarded by the Chinese and they are credited with having told foreigners, when asked about the origin of silk, that it was obtained from the fleeces of sheep, which, on being sprinkled with water in the sunshine at certain seasons of the year, abounded with fine threads. It is apparent that the secret was successfully kept until about the year 300 A.D.

The introduction of silk to Japan at the end of the third, or early in the fourth century, is said to have followed the smuggling out of China of a number of silkworms and the abduction of four Chinese girls who trained the Japanese in the art of sericulture and the use of silk. About the same time, tradition attributes the spread of sericulture to India with the arrival, to join her Indian husband, of a Chinese Princess who had managed to conceal the eggs of silkworms in her head-dress.

An Outline of the History of Silk (*contd.*)

The Emperor Justinian introduced silk to Europe in the sixth century. His interest had been aroused by two Persian monks who had lived in China, and he persuaded them to return and attempt to secure the precious silkworm eggs. They were successful in escaping the vigilance of the Chinese and brought back a supply of eggs hidden in a hollow cane.

While silk had long been woven on European looms, it was not until about 1147 A.D. that sericulture came to the Western countries of Europe, first to Sicily and thence to Northern Italy. A further four hundred years elapsed before the art was established in France and it was not until 1825 that sericulture was introduced to England. It remained flourishing until nearly the end of the nineteenth century when, following a silkworm plague which first appeared in Europe in 1854, the industry in France almost ceased. Only Italy in the West remained a substantial producer of raw silk.

In the last two hundred years, sericulture has spread throughout the world. Partly on account of climatic conditions, but principally because of lower production costs, Japan has, however, emerged as the main source of raw silk supplies. China takes second place, producing rather less than half as much as Japan, with Italy following at again less than half as much as China.

As distinct from sericulture, the production in England from imported raw silk dates back to 1585, when the sack of Antwerp drove many Flemish artisans to England, but efficient machinery was not introduced until 1732, when Sir Thomas Lombe set up his famous silk mill at Derby. Since that time continual progress has been made in the development of technique and skill in the handling of the fibre. The production of English silk mills is universally recognised to be representative of the highest standards of craftsmanship, and to do full justice to silk as the Queen of Textiles.

Emperor Justinian and the Monks